

Novel Hall Effect Dynamics Hypothesis and Proposal for High-Efficiency Conductive Wire Design Based Upon Cuprate Lattices

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Introduction

Although the Hall Effect is considered to be, by most, “established science,” little attention has been paid to what prompts a specific electron flowing through a conductive wire to engage in the characteristic “peel off” motion seen in the Hall Effect. This author proposes that the electrons which undergo this process and which consequently never reach their destination are not randomly determined but are, rather, generated as a consequence of chance configurations of copper molecules and the frequency-alterative effects those molecules have upon some of the electrons.

Abstract

An electron, like a photon, as it travels through a conductive wire, has a property of phase and generally speaking, at least in the United States, when electricity is delivered to homes and businesses, this rate of phasing is 60Hz, meaning that electrons undergo an up- and down-swing sixty times per second. This frequency is substantially less than the rate of phasing of light, yet the same principles which govern the phasing of light govern the phasing of flowing electrons.

When electricity of a uniform frequency is transmitted through a conductive wire, particularly with Direct Current, chance alignments of molecules within the wire (which is generally not composed of cuprate lattices but rather of molecules with haphazard relative placement) create a frequency distortive effect which has yet to be formally identified. Individual electrons or small clusters of electrons, if their (curved) path (curved by phasing) coincides with a series of copper molecules, they will experience a reduction in their frequency. When large numbers of electrons share a uniformed frequency, they resist scattering far more effectively than they would without this uniformity.

In the case of both light and electrons, opticians have failed to recognize the fact that phase height relative to frequency can be variable even with regard to light of a fixed frequency when that light is of a lower intensity or when single photons are emitted. Scattering occurring within the context of individual phase motions of light has the effect of widening the defacto phase height and increasing the area which must be covered by light in order to phase. This not only causes light to move more slowly, but it makes Hall Effect loss of electrons more likely. Random, chance alignments of copper molecules within a conductive wire are analogous to chance alignments of air molecules. Whereas electrons are scattered by these alignments within a wire, light is scattered by similar alignments within atmosphere.

If one wishes to create a wire which conveys as close as possible to 100% of electrons successfully to their destination, we must endeavor to prevent, insofar as is possible, the initial distortion to frequency caused by these alignments. The use of a lattice-structured cuprate is a logical starting point in this endeavor, but the use of just any lattice is insufficient to achieve the desired results.

When an individual electron's frequency is altered, it falls out of synchronization with the "herd" of electrons, which can be visualized as a school of fish swimming as a group in order to enhance their combined propulsive capability. Each phasing of light or electricity can be likened to the jaunty oscillations of such a school of fish. An individual electron which is not protected by the combined magnetic moment of the frequency-uniformed wave is far more susceptible to Hall Effect scattering and is the first electron to be lost.

Alternating Current's ability to prevent this loss is largely the result of multiple streams of electrons with offset phase positions using their magnetism in order to brace frequency-altered electrons within these magnetic fields. Alternating Current does not prevent this distortion to the frequency of select electrons, but it does prevent changes to the angular momentum of the electrons which could cause them to escape the conducting wire. This is achieved through a form of magnetic bracing (imagine a ferromagnetic filament being braced positionally by two North-facing magnets used like tweezers.) Another form of power transmission I term Helical Current would greatly improve upon the advantages of Alternating Current and this was written about at some length in a prior publication. This publication, by contrast, concerns how wires may be physically structured differently at the nano-scale in order to further enhance the efficiency of transmission in a non-superconducting regime.

One approach to increasing the efficiency of conduction within the regime of a cuprate lattice structure would be to employ a great many conductive cores within a single overall conductive wire in which the center of these cores feature symmetrical, cubic cuprate structures but wherein the lattices are purposefully distorted as distance from the core increases. The distortion would take the form of more closely spaced nodes near to the outer limits of the individual cores which are designed to step up the frequency of the electricity which passes through those areas. Electricity would not be injected, primarily, into those areas but would bleed into those areas only as a result of Hall Effect scattering. If we can safely assume that Hall Effect scattering is induced by a reduction in electrical frequency of select electrons, by stepping up the frequency of only those electrons we suspect have been slowed in their frequency, we can coax those electrons into rejoining the primary, frequency-uniformed electron grouping.

To this, we must also add a method for enabling these frequency-restored electrons to "catch up with" the wave of which they were originally a part. After all, in order to end up near the circumference of a conductive wire or individual core, they must follow a non-linear path and this non-linearity results in less distance being covered versus those electrons not impacted by the Hall Effect. Restoring frequency, alone, therefore, would not mitigate the

tendency of the electrons to continue to follow non-linear paths if the electrons cannot be re-assimilated into the primary current within the core channels. I propose that electrons can “play catch-up” within a stream of electrons through the magnetic elimination of phase, something which would enable electrons to follow a more direct path through a wire without mitigating spin. Each electron can be magnetically prevented from changing position laterally due to phasing through the introduction of a strong magnetic field at the nano-scale through the cuprate material itself which would lend itself to its own frequency-alterative effects. Naturally, as any magnetic influence sufficiently powerful to prevent phasing would also permanently change frequency, every other *phase-preventive node* would need to increase frequency by design and every other *phase-preventive node* would need to decrease it in order to ensure that the electrons’ frequency is ultimately preserved. This would require a fine degree of control of the relative position of nodes within the wire.

Conclusion

Although the use of a cuprate lattice has already been investigated by researchers for enhanced conductive capacity, the underlying reasons why these structures are more efficient conductors has not been properly established. With finessing of the specific lattice distortion pattern, these structures may ultimately provide a superior to conductive medium to standard copper wires. It is assumed that cuprate lattice transmission lines may be prohibitively expensive, making the concept one of academic value but of little practical value. However, confirming that the prevention of frequency distortion should be the overarching goal in electrical transmission may provide a theoretical framework which makes a future breakthrough more likely. By beginning with a lattice structure attuned to the intended frequency of the electricity, scattering may be prevented in the first place. Extant, standard copper wires may be augmented by adding the frequency-restorative material as a sheathing layer, perhaps making the approach sufficiently affordable for practical use.